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OUTLINE OF WORK FOR THE YEAR 1907-8

KINDERGARTEN

The children of the kindergarten period are interested in reproducing the life about them, the familiar occupations of their homes and immediate environment. In the play spirit, all their images find expression in action, and they are satisfied with the action for its own sake, and care very little about a definite result. It is by means of this play that they explore their surroundings, and experiment with materials, and gradually gain control of their own powers.

The work of the kindergarten consequently centers in the home life, and in a few of the activities most closely associated with the home.

The arbitrary divisions into subjects, as history and nature-study, are made only to connect more closely the work of the kindergarten with that of the other groups of the school.

History.—Autumn Quarter: Subject—homes. (1) Our own homes—inside and out. (2) Homes of animals: (a) domestic animals for which homes are provided, such as dogs, pigeons, chickens, horses, cows, sheep, pigs; (b) animals which find their own homes, such as rabbits, squirrels, bees, birds. (3) Relation of farm to the home.

Winter Quarter: Subject—baker (kitchen and shop), grocer, milkman, postman.

Spring Quarter: Subject—market gardener—close relation to grocer and to our life. Our own garden—in relation to that of the market gardener. Plans in sandpans of yards, gardens, playgrounds, and setting for stories.

Nature-study.—Autumn and Winter Quarters: The areas around which the year's work centers are: (1) garden, (2) lake-shore, (3) the Midway and playground, (4) the parks. Observations: Seasonal changes—effect of frost on plant life, animals, and people; habits of late birds; gathering seeds and

noting how they are distributed; study of nuts, fruits, and vegetables, according to the way they may be preserved and stored for the winter. Care of animals.

Spring Quarter: Effect of warm winds and sun upon the earth; effect of moisture, heat, and light upon growth of seeds, incidentally noted; return of birds and insects; watching the bees at work in the garden. Watching the appearances of plants in the garden and in vacant lots. Noting leaves of these plants and trying to find others like them, incidentally learning the names of plants and flowers.

Cooking.—Used only as a social industry, and employed by the teacher with the children as a mother in the home would use it. The special function of the cooking in the Autumn Quarter is the preparation of grape juice, jelly, and cookies for a Thanksgiving celebration.

Mathematics.—Number used constantly as a limitation in building; in choosing children for games; in construction; in designing; in gardening; in taking measurements, and in allotting space.

Literature.—Rhymes and Poetry: From Lear, *Nonsense Rhymes* and *Mother Goose*: “Hickory Dickory Dock,” “Sing a Song of Six-pence,” “Little Jack Horner,” “Mary, Mary, Quite Contrary,” “Hey, Diddle, Diddle,” and others; Christina Rossetti: “Mix a Pancake,” “What Does the Donkey Bray About?”, “What Does the Bee Do?” (from *Sing Song*); Robert Louis Stevenson: “The Rain Is Raining,” “Birdie with the Yellow Bill,” “When I Was Down beside the Sea,” “The Swing,” “My Shadow.”

Stories: From *Six Nursery Classics*, edited by O’Shea: “The Old Woman and the Six-pence,” “Chicken Little,” “The Three Bears,” “The Little Red Hen;” from Aesop, “The Lion and the Mouse;” from Dasent, *Stories of the Field*: “The Pancake,” “The Pig and the Sheep,” “The Lad Who Went to the North Wind;” from Dasent, *Popular Tales from the North*: “Billy Goats Gruff,” “The Gingerbread Man;” from Thaxter, “Peggy’s Garden and What Grew Therein;” Helen Hunt Jackson, “St. Christopher;” adapted from Cary, “Peter at the Dike.”

Dramatic work: "Playing out" the Mother Goose Rhymes or any simple story that suggests action of the simplest, most childlike kind.

Gift work.—Building with large and small blocks: animal houses, bakeries and furnishings (for bakeroom and shop), tile floors and show-windows for the shop; gardener's wagons and toolhouse, chicken yards and coops with sticks, marking off gardens with lentils.

Handwork.—Christmas presents: work incidental to the celebration of Hallowe'en, Thanksgiving, and Christmas. Animal houses of cardboard. The furnishing of a bakeshop and bakeroom made of a box. Construction of market gardener's tools and toolhouse (arranged in a box top), with small wagon or wheelbarrow for carrying tools. Making, or seeing made, some kind of raised bread (merely to interest them in the way that yeast affects dough). Cardboard baking-pans, ovens, and measuring-cups.

Art.—Autumn Quarter: (a) Painting. Fruits, vegetables, and other subjects of interest to the group. Paper-cutting for decorative purposes. Opportunity is given in both the clay- and color-work for the unconscious exercise through play of the rhythmic instinct; (b) Modeling. Dishes, kitchen utensils, flower-pots, tea-rests, marbles, seeds, and fruits.

Music.—Exercises in tone placing, in imitation of whistles and bells, and in humming simple melodies; simple scale songs; songs of question and answer. Appropriate songs from kindergarten and primary songbooks by Eleanor Smith, Jessie Gaynor, Mrs. Crosby Adams, Patty and Mildred Hill, Neidlinger, Alys Bentley; Elliott's *Mother Goose*.

Rhythm and Games.—Skipping and marching; simplest ensemble dances. Romping Games: skip and hop tag; changing chairs; "Chickeny, Chickeny, Craney Crow," "The Little Mice Are Hiding," "Cat and Mouse," "Going to Jerusalem," "The Farmer in the Dell," "Three Circles," beanbag races. Rhythmic Games: skating, seesawing, swinging, windmill, arm rhythm, rockingchairs, pendulum, and boatrowing movements.

FIRST GRADE

In this section the children begin to find satisfaction in activity which has some definite result. They learn gradually to work with an object in view. They select something to be done, and show some power to adapt means to ends. They begin to compare the results obtained with the ideal which they had in mind in undertaking the work.

The material for study must still be based upon immediate experience, but now more than before use may be made of comparison and reflection.

The constructions of the children have rather more lasting value to them.

History.—During this year as in the kindergarten period, the activities and interests of the children still center largely around their homes. However, they are able to branch out a little farther into the sources of some of the necessities of their own home life.

In the autumn the groups take up the study of the farm as the source of supply of our grains, fruits, vegetables, and dairy products. They construct from blocks, boxes, or cardboard the houses, barns, and various animal shelters, and make miniature farms in large sand-tables. They make butter and cheese, and grind wheat into flour and corn into meal. General activities of farm life are reproduced in dramatic plays and games.

With the cold weather the immediate consideration of farm life is dropped until spring. The children build up some idea of the domestic occupations and surroundings of the Eskimos. As far as possible they make their pictures of the northern conditions through the similarity to our own most extreme cold. They have Eskimo pictures and stories, visit the excellent exhibit at the Field Museum, and construct summer and winter scenes of Arctic life.

With the study of Indian life they again have the benefit of the museum. The occupations of the people are also primitive, but differ from those of the Eskimo on account of physical environment. Possibly the study of the shelter, food, and cloth-

ing of these people lends more color and significance to the children's thoughts of their own homes.

During the spring the children again work at farm life, laying out and planting a small farm in the garden. They use such buildings on this farm as are in good condition from the previous year, and renovate or replace old ones.

The play center, the make-believe home around which the rest of the work circles, is the large playhouse constructed by the older children during the previous year and partly furnished by the younger ones. Whatever furniture, rugs, curtains, and wall paper, are needed are made early in the autumn. This playhouse, together with the sand-table constructions, affords a basis for the imaginative dramatic play still so near to the six-year-old interest.

Geography and Nature-study.—The children are taken on such trips and excursions as bring them into strong and close relation with various forms of nature which are as yet rather new to most of them. In the fall they go to a good farm, the lake-shore at Windsor Park, Beverly Hills, and Lincoln Park. In the spring they again visit these places, possibly substituting Thornton for Beverly Hills at the time of violets and crabapple blossoms. Most children know the woods in summer; but few know the autumn colors or spring flowers.

Especial attention is paid to animals of all varieties. At the farm are seen the domestic horses, cows, sheep, pigs, and fowls and some of the provisions for their comfort. At school there is a circulating series of pets: rabbits, squirrels, doves, turtles, mother cat and kittens, and possibly a lamb in the spring. These must be observed as to the care they need, and the children are made responsible for their welfare.

Some wild animals, polar bears, and seals in connection with Eskimo life, and deer, buffalo, and foxes with Indian, may be noted especially at Lincoln Park and seen stuffed at the museum.

In the fall the children set out bulbs in the east yard and in flower pots for winter forcing. In the spring they plant in their small farm in the garden, lettuce and radishes to mature in the

early summer, and wheat, corn, potatoes, and onions to be harvested the following fall.

When for any reason in connection with the study of harvesting, planting, Arctic conditions, or everyday experience, the question of "weather" enters, simple observations are made and recorded. In noting direction of wind, children learn the points of the compass and when they are in relation to school, home, and lake.

With the study of the Eskimo, the children gain some notion of the barren, treeless snow fields and ice bound country of the North. With the Indians, they picture the grassy prairies and forested hills. These have to be closely connected with their own experience, but it is a beginning of geographical imaging.

Cooking.—In addition to the actual cooking the children have two lessons a week devoted entirely to the formal side of the work. They read and write the recipes and work out the number problems involved in them.

Their cooking consists in preparing: baked apples; apples cooked in syrup; dried fruits, stewed; lemonade; fruit lemonade; sherbet. Different ways of thickening liquid: by gelatine, as illustrated in lemon jelly; by sugar, in cranberry jelly; by eggs, in baked custard; in making cocoa, sandwiches, and other articles demanded by the social life of the children; and the beginning of the care of the house in the setting of tables and serving of simple luncheons.

Mathematics.—The making of furniture and wall paper for the playhouse, cardboard buildings for the farm, and book covers requires constant number work, especially with the ruler as the instrument for measuring. With the beginning of cooking they use another unit, the cup, and become familiar with one-half, one-fourth, one-third, three-fourths, and two-thirds. Most of the number work is incidental to the making and cooking, and it is only when the opportunity seems fitting that certain facts are fixed by special drill.

English.—(1) Literature: (a) Rhymes and poetry: Lear's *Nonsense Rhymes* and *Mother Goose*; repetition of those given in kindergarten; Christina Rossetti: "What is Pink?", "Brown and

Furry," "If a Pig Wore a Wig;" Robert Louis Stevenson: "Bed in Summer," "The Wind," "Foreign Children," "The Whole Duty of Children," "The Cow," "Singing;" "Little Gustava," Celia Thaxter; "I'll Tell You How the Leaves Came Down," Susan Coolidge.

(b) Stories: From Dasent's *Popular Tales from the Norse*: "Boots and His Brothers," "Princess on the Glass Hill," "Gudbrand on the Hillside," "Why the Bear Is Stumpy Tailed;" adapted from Grimm: "The Wolf and the Seven Young Kids," "Cinderella;" from Grimm's *Fairy Tales*: "The Shoemaker and the Elves," "One Eye, Two Eyes, and Three Eyes," "The Town Musicians;" from Howells' *Christmas Every Day in the Year and Other Stories*: "The Pony Engine," "Christmas Every Day in the Year;" "The Sleeping Beauty," Perrault; "The Gingerbread Man;" Whittier's *Child Life in Verse*; "The Bell of Atri," from Baldwin's *Fifty Famous Stories Retold*; "German Legend of the First Christmas," St. Nicholas; "The Birth of Christ," read from Luke; *Fables of Aesop*: "The Wind and the Sun," "The Lion and the Mouse."

(2) Reading: (a) The work in phonics begins immediately and continues throughout the year. The children learn the sounds of all the consonants and combinations of consonants, the simple vowel sounds, and also some of the more unusual combinations as *oy*, *aw*, *ight*, etc. At first the work is largely in the form of games, but gradually the attempt is made to bring the knowledge thus gained into working use in reading.

(b) On the blackboard the children see constantly words and sentences in connection with their work. Through much repetition they learn to recognize words and are able to follow simple written directions. Recipes are written, and sometimes printed, for them. They also have printed short reading lessons or records of what they have done in connection with their history or science. (c) Books used in reading are *Heart of Oak* No. 1, *Aesop's Fables*, *Hiawatha Primer*, and *Eskimo Stories* by Mary E. Smith.

(3) Writing: The writing at first is almost entirely con-

fined to blackboard work. Later it is extended to paper with crayon or charcoal.

Art.—(a) Drawing and painting. At six the seeing is indefinite and general even at its best. It seems to be important to introduce the children to a wide range of visual material, rather than to force the accuracy of observation in any one direction. The subject-matter includes the seasonal coloring of plants and landscape, the illustration of the dramatic incidents of the history and literature and the decoration of such articles as the children have occasion to make during the school year, as portfolios, Christmas presents, valentines, invitations. The materials used are water-colors with large brushes, chalks, and charcoal. The technique of the year includes the use of large washes, mixing of green, orange, violets, recognition of at least two values of light and dark, and the co-ordination necessary to render the action in silhouette of animals and the human figure. While the dominant motive of this age is the utilitarian, there is an unconscious exercise of the aesthetic instinct, and it is the intention to develop this in all of the work which has been indicated.

(b) Clay-modeling. Fruits, animals, etc., to illustrate work in nature-study, history, and literature; bowls, cups, trays, etc., for Christmas gifts. The aim is to give much opportunity for expressing freely in so plastic a medium as clay, and incidentally to develop a more definite feeling for shape.

Music.—In the first year of formal music-work, emphasis is laid upon song-singing, that the children may join with the older primary grades in assembly singing.

They are taught to sing the scale by syllable, to write the scale on the staff, and to write exercises based upon portions of the scale. Two, three, and four-pulse rhythms are discussed, the children being led to recognize these different rhythms, to clap them, and to picture them on the blackboard in time to rhythmic music.

Gymnastics.—Marching, running, body movements and breathing, jumping, and games; short daily periods; work arranged to require little form or application; largely imitative; proportion of formal work to jumping and games one-third.

Music accompanies all parts of the lesson. Games of sense, inexact imitation, of no purpose, of variety of motion, and games involving all the players. One lesson each week in rhythm. Relation of directions and the different parts of the body discovered; their relation to various musical rhythms.

SECOND GRADE

The children in this year are able to go still farther than in the First Grade in comparing their own activities and surroundings with those of other peoples. Experience shows that they are easily led to trace the early steps in the evolution from past conditions of some of the industries of their environment. Here, then, the study of history, properly speaking, may begin. More careful observation than before may be expected in nature-study and geography.

Industrial History.—The history, woodwork, cooking, and nature-study for the first half of the year group themselves about the idea of food-getting. The industrial history attempts to put before the children the interrelation of the acts by which food comes to our table, first by seeing the process in Chicago, second by giving meaning to this very complicated process by stories of simple and primitive life.

The children visit a farm, South Water Street, a wholesale grocery, a bakery, a milk depot, a grain elevator, express depot, and a dock, to see the source and distribution of food in Chicago.

In order to focus and utilize the observations made upon these trips the children build in the woodshop toy representations of a grocery, bakery, milk depot, grain elevator, freight depot, dock, boats, train, and bridges.

Waterloo's "Story of Ab" is told with such detail that the children may work out primitive methods of getting food, making fire and weapons, pottery, clothing, and shelter. Field-trips are taken to gather such foods as the Indians about Chicago may have relied upon (*see Nature-Study*).

In the second half of the year dyeing, weaving, and garden-making determine the interest so that the history, textiles, and nature-study center in these activities.

The history here as in the first half of the year serves to give perspective to the immediate occupations. Stories are told of the great shepherds and weavers, those of Palestine, Arabia, Persia, and Greece (for stories and poems *see Literature*).

Trips are taken to a carpetweaver's, Marshall Field's rug department, and the Field Museum. To intensify children's images of these people and their environments models are constructed and pictures are drawn.

By April work in the garden begins. As the children prepare the ground and take care of the garden, the food-getting of hunter and shepherd people is recalled, and for the first time there dawns a consciousness of a time when agriculture was unknown. Then stories are told of people in the early agricultural stage, the Lake Dwellers of Switzerland being chosen as the type.

Geography.—The experience in typical areas and with natural materials gained in the field-trips forms the basis for geography.

After the trips the children make plans in sand or on paper of the routes followed and areas visited. No attempt is made at conventional mapmaking, the teachers' problem being to discover when and how children make the transition from purely picture records to the conventional representation.

Trips to the lake shore furnish collections of the common pebbles, and limestone, sandstone, quartz, chert, greenstone, granite, and iron pyrites become familiar. The children make crystals from various substances and this work culminates in our rockcandy for the Christmas tree.

As a background for the stories told in the history period the following regions must be pictured: a temperate forest area with caves and swift flowing river; the desert, and portions of Persia, Greece, and Switzerland. Stories, reading-matter, visits to the stuffed-animal section of the Field Museum and to the "zoo" at Lincoln Park feed that absorbing child-interest in wild animals.

Nature-study.—Trips are taken to Thornton at the time that the fruit trees are in bloom, to Ravinia to see autumn coloring, to Clark Junction to gather swamp material, to the sand dunes at Miller's, to Flossmoor, and to Cheltenham Beach.

Upon these trips the children learn to know the common wild flowers and the familiar birds of the region.

A pair of rabbits and a pair of carrier pigeons have been selected as the particular care and property of the second grade, and homes will be made for these animals in the enclosure outside the grade room.

We find in the immediate vicinity of Chicago that the Indians depended upon the following list of wild things for their vegetable food: acorns, roots of arrow leaf and roots of water lily, tips of cat tails, stems of reeds, roots of wild hyacinth, wild rice, cranberries, chokecherries, wild grape, nuts, and sunflower seeds. We take trips for the purpose of gathering these foods, and prepare them for eating as nearly as possible as the Indians did.

In a similar way we go out to gather those vegetable materials which the Indians and early settlers used for dyes. Grasses, sedges, bulrushes, and reeds are gathered for experiments in weaving.

The children in this grade in the past have shown such interest in buying, rigging up, and playing with electrical apparatus that we furnish the material necessary for play with magnets and frictional electricity.

Cooking.—The social cooking provides luncheons alternate weeks in which the serving and setting of the table are taught. The children prepare grape juice, fruit lemonade, sherbet; they learn to thicken liquid by gelatine as in lemon jelly, by sugar as in cranberry jelly, by egg in baked custard, and by flour in tomato soup. They make rockcandy and cream candies for Christmas.

The children experiment with primitive processes. They make a fire out-of-doors, trying to do this without matches, and on this bonfire they boil water by means of hot stones, boil meat and eggs in this water, roast meat on the end of a stick, roast chestnuts, and make cakes of various meals which they have prepared from acorns, wheat, oats, and wild rice.

Mathematics.—The aim in this work is to put mathematical power into the hands of the children just so far as they have use for this power. Drill is given at the time that a need for a fact or process arises.

The following processes are demanded and should be so mastered as to be used with skill and accuracy: (1) addition of two columns of figures, and subtraction of quantities under 100; (2) recognition of pieces of money; (3) use of halves, fourths, thirds, eighths, twelfths, and sixteenths; (4) addition of simple mixed numbers; (5) making of plans to a scale; (6) use of gram, ounce, pound, gill, pint, quart, linear, square, and cubic inch, foot, and yard as standards of measurement; (7) construction of square, oblong, right-angled triangle, equilateral triangle, circle, and hexagon; (8) counting by twos, threes, fours, and fives.

These principles and relations are involved in the actual work as follows: (1) and (2) in keeping accounts (a blank book has been devised on the principle of a check book. The children deposit with the teacher one dollar, and she keeps on hand the school supplies, furnishing them to the children on presentation of check. The children retain in the check book a stub showing the material purchased, cost of same, and balance to their credit); (3), (4), and (5) in construction with wood and cardboard, cooking, and planning garden; (6) in scientific experiments, making beanbags, cooking, and construction; (7) in making circular and rectangular garden beds, valentines, maybaskets, candy-boxes, and weaving; (8) planting gardens, cooking, and keeping accounts.

English.—(1) Literature: (a) Rhymes and poetry: Repetition of Robert Louis Stevenson's verses given before; the following ones added: "The Lamplighter," "Young Night Thoughts," "The Sun Travels," and "Nest Eggs." "Clouds," Frank Dempster Sherman; "Snow-Storm," Sherman; "Hunting Song," Coleridge; "The Lamb" (first stanza) and "The Shepherd," William Blake; "Fairy Folk," and "Wishing," Allingham; "Seven Times One," Jean Ingelow; "March," Wordsworth; "The Wonderful World" (three stanzas), William Rand; "The Birds in Spring," Thomas Nashe; "Seal Lullaby," Kipling; "Ariel's Song," and "I Know a Bank whereon the Wild Thyme Grows," Shakespeare; "The Swallow's Nest," Edwin Arnold; "The Sun with His Great Eye" (a fragment), John Keats. Most of the poems

mentioned above may be found in *The Posy Ring*, edited by Kate Douglas Wiggin.

(b) Stories: Adapted from Grimm: "Snow White and the Seven Little Dwarfs," "The Enchanted Stag;" from Hawthorne's *Wonder Book*: "The Golden Touch," "The Miraculous Pitcher," and "The Chimera;" "Little Thumbling," Perrault; "Old Pipes and the Dryad," Stockton; "Muleykeh," adapted from Robert Browning; "Mowgli's Brothers" and "Toomai and the Elephants," Kipling.

(2) Oral reading and dramatic art: The poems given above under "Literature," and the selections to be printed for the children's reading, listed above, offer opportunities for gaining skill in reading aloud. Certain of these are memorized for morning exercises and festivals, and are used as a means of entertainment at our social periods.

(3) Reading: The children's own reading is from books, printed slips, and script. Each child has at the beginning of the year covers for printed slips. These include the following subjects: Sketches and stories of shepherd life and descriptions of the desert, by Jennie Hall; stories of hunter life and adaptations from Waterloo's *Story of Ab*; descriptions of Arabia, Palestine, and Switzerland; "Threshing in Greece," by Jennie Hall; selections from children's poetry, some rhymes of Christina Rossetti, and the words of the children's songs. We use "Little Black Sambo" and "Peter Rabbit," and selected articles from the following readers: *Lights to Literature*; *Heart of Oak*, Vols. I and II; *The Blodgett Reader*; *The Culture Reader*; *Dopp's Tree-Man* and *The Cave-Man*; *Stories for Children*.

(4) Writing: The aim in the writing is to gain freedom and legibility. The drill comes through daily demands for written expression. An alphabetically classified list of words which have been used frequently is kept by each child as a means of independent reference and as a record of progress. The above-mentioned daily written expression together with general conversation gives opportunity for the teaching of English.

In the written work the definite points to be made are: the feeling for a sentence; use of capitals at the beginning of a sen-

tence, in proper nouns, and in direct address; use and meaning of question mark, apostrophe, quotation mark.

Art.—(a) Drawing and painting: The children of this year are strongly imaginative. Free from the self-criticism which later retards creative effort, they are fearless in the pictorial expression. Conditions are favorable to the emphasis of imaginative drawing at this age. The interest in the idea should be the means of developing a closer observation of natural phenomena as the symbols of expression.

The technique of the year includes use of large washes, three tones of dark and light, expression of plane relations by variations of size and value, in landscape work, and action of figure. The aesthetic qualities emphasized are rhythm and balance. (b) The more formal design is developed in the weaving, and includes the use of symbols, two values of dark and light colors of two intensities.

Clay: The modeling is largely illustrative. The children make figures to use on their models of the Arabian village, "Fire-country." They make typical scenes from shepherd life in low relief and pencil trays, flower-pots, tea-tiles, or other pottery which can be made without the use of a glaze.

Textiles: The children make marblebags or belt-pockets, couch covers, portières, hammocks, or rugs for the playhouse. They dye the raffia, wool, cotton, silk, or linen, with which they weave, making simple experiments with vegetable dyes (*see* Nature-Study). They invent the necessary change in plain weaving to introduce stripes, squares, diamonds, or other simple patterns.

We have cotton balls, a sheepskin, flax from our garden, and silk-worms' cocoons with which to experiment, spinning these fibers.

In the spring the children construct out-of-doors a primitive form of loom, on which is woven a large mat of rushes or wool.

Woodworking: The first month the children make a very simple thing, as a Christmas gift.

By November they have made their industrial trips and have plans to build toy reproductions of the places visited. Children work in groups, making a grocery, bakery, milk depot, grain

elevator, freight depot, dock, boats, train, and bridges. The grocery is approximately three feet square by two and a half feet high, and the others are built in proportion.

Music.—Work in musical rhythm is emphasized—simple melodies are given which the children are led to notate on the blackboard, and afterward copy on paper to be preserved in their notebooks. The names of lines and spaces are taken up; also the time-symbols (whole, half, quarter, and eighth notes). Rote songs are taught for assembly singing.

Gymnastics.—Beginnings of formal work in marching and running; odd fancy steps; postural work and breathing still imitative; beginning of exercises on apparatus (hanging); games. Short daily periods. Proportion of formal work to apparatus and games, one-half. Music accompanies all but apparatus and games. Begin games of exactness of motion.

One lesson each week in rhythm. The simple rhythms—walking, running, skipping, hopping, sliding, etc.—woven into combinations and combined with rhythmical movements of the arms and body.

Dancing.—First five positions for the feet; bows; grand right and left; beginning exercises leading to the waltz and two-step; galop square; marking the rhythm by hand; clapping in the waltz, two-step, and galop.

THIRD GRADE

In this grade there is not only an interest in results obtained from work but also a growing interest in the means by which ends are reached, a dawn of desire for skill. The child takes pleasure in doing things well and sets up a standard by which to measure the excellence of his work.

This is accordingly the time to emphasize the various forms of technique, as reading, writing, and drawing. If the child feels the need of these as modes of expression, or as a means of gaining knowledge, he overcomes with comparative ease the difficulties in the way of acquiring them.

Activities and occupations to be carried on during the year are: (1) walks in the park and excursions into the surrounding

country; (2) gardening; (3) cooking, baking, preserving; (4) pottery; (5) textiles; (6) woodwork; (7) housekeeping and care of rooms, halls, and grounds; (8) a store, as a distributing point of supplies; (9) celebration; (10) parties and daily morning exercises.

The children are encouraged to acquire knowledge from every available source in order to carry on these activities in the most effective manner, and also in order to appreciate some of the social activities which they see around them. For this purpose it is necessary to visit shops, factories, markets, docks, and wharves in the vicinity, where similar occupations are engaged in, and to visit museums and collections of all kinds. It is necessary to perform experiments, to use books and pictures for information, as well as objects and specimens from the school museum. Each activity has a scientific and social aspect, both of which receive due attention. Records of the work are kept in the form of finished articles, plans, collections of objects studied, written notes, essays, drawings, and paintings.

History.—Basis: (1) observations of trade conditions; South Water Street; boats and freight-cars loading and unloading; stores; children's own desire to barter and exchange; (2) children's occupations in making boats and carts, and keeping a store for supplies.

Topics: Beginnings of trade, of exploration, and of travel; development of means of transportation and of a diversity of arts; expansion of industrial, social, and political life. As concrete illustrations of the era of early trade and discovery, some phases of Greek and Norse history are selected for study.

Geographical conditions which encourage early navigation and commerce—islands, harbors, overproduction of some commodity, desire for other products. Industries and occupations of the early Norse and Greek. Development of trade. How trade was carried on; means of transportation by land and water. Discoveries and expansion of geographical knowledge. The Vikings, their mode of life. Discovery of Iceland, Greenland, and America (*Vinland*). The Homeric Greek—based on a study of the *Odyssey*.

Standards of measurement, currency, use of metals. The children make furnaces, melt metals (lead and tin), make molds, and carry on the whole process of molding in lead and tin. Arrow-points, spear-points, battle-axes, money, weights, etc., are made. Social condition of the people, classes of people, the king, the assembly, games and sports, warfare and warlike conditions; ideals of the time, and religious beliefs.

The story of Columbus is told as embodying the spirit and aims of exploration. For comparison stories are told of modern explorers, as Nansen, Livingstone, Stanley; their equipment and aims as compared with those of the ancient explorers.

Geography.—(1) The neighborhood. On all excursions the natural features are observed. The lakeshore—shore line, bluffs, different kinds of beaches. Beverly Hills—the ravines, brook-basins. Swamps—ridges with trees. (2) Typical environments. Mountain landscapes: Norway and Greece as types; narrow valleys, rapid rivers, falls, lakes; forest-covered, barren, and snow-covered mountains. Coasts: bays, headlands, fjords, islands, harbors. Animal life in the northern forests; animals of the northern seas. Study of such typical environments with relation to their social occupations, fishing, lumbering, hunting, trade (*see "History"*).

Given typical physiographical features, the children plan routes of travel by sea and land; construct maps in sand and on blackboard. These maps are made to record first imaginary trips, and later the journey of the Norsemen to America, the caravan travel through the deserts, Columbus' discovery of America.

Children picture Arctic scenery with Nansen's journey, and tropical scenes with Livingstone and Stanley. The earth as a ball is introduced with the study of Columbus, and the different oceans and land masses noticed with relation to one another. The children construct simple compasses, and learn to use them on their excursions.

Nature-study.—The children have charge of the beehives in the garden. This responsibility necessitates a close study of these insects as to cleaning hives, winter conditions, removing honey, making new hives. This work interests the children in the

life-history of bees and other insects; the bumble-bee, ant, and butterfly are studied especially.

Garden: This year is responsible for three flower beds in front of the school building in which tulips bloom in the spring and asters in the fall (transplanting); also for planting ivy and climbing-roses. Window-boxes in the house allow care of plants during the winter; the children are encouraged to have gardens and window-boxes at home, they themselves supplying the seeds. Note is made of trees that blossom early (food for bees). Sweet alyssum is planted for the bees.

Excursions: To Jackson Park, Wooded Island, South Shore, Beverly Hills, Lakeside. The special interests of the children are noted and followed up as far as demanded by them. Birds, bird-notes, building of nests, some ways of food-getting; the woodpeckers, kingfisher, swallows, robins. Materials gathered on these excursions are cared for, and different kinds of seeds mounted to show seed distribution, classified as to means of dissemination; insects and cocoons are placed in an insect case; frogs' eggs, tadpoles, salamander eggs, snails, larvae of mosquito, dragon-flies, etc., in an aquarium in the room; turtles, snakes, and toads are cared for in the school museum. The habits of the animals with which the children have become acquainted during the summer are discussed, such as the squirrel, chip-monkey, bat, muskrat, and others. Stories of the same are told and read.

Temperature is studied in relation to bees, and to bulbs and other plants out-of-doors. Barometers are made and compasses constructed (*see "History"*). Phenomena of the Arctic day and night (*history*) compared with our own conditions lead to more interested observations of the sun's position. Experiments on evaporation (*see "Cooking"*) are made. Paintings are made of out-of-door scenes often enough to be a record of the changes of the seasons.

Home-economics.—(a) Cooking: Drying of grapes; grape jelly; sugar cookery; Christmas candies; starch cookery; making of white sauce; cooking of starchy, sweet-juiced and strong-juiced vegetables; vegetable soups; making of bread. Study of

fat in the making of butter. (b) Science: Quantitative work in evaporation; effect of the skin of the fruit on evaporation found, through the comparison of grapes and apples; study of individual food plants, parts of the plant used for food. Classification of vegetables according to their composition and the parts of the plants used; starch and cellulose obtained from potato; appearance of starch under the microscope. Iodine test for starch; determination (roughly) of the amount of water and starch in some foods; observation of the change of starch to sugar by the sweet taste developed in the chewing of starchy foods. Comparison of yeast used in bread-making with other plants. Density of different liquids from the study of milk and cream; determination of the amount of fat in milk through butter-making.

Mathematics.—If the children are actually doing work which has social value, they must gain accurate knowledge of the activities in which they are engaged. They keep a record of all expenses for materials used in the school, and do simple bookkeeping in connection with the store which has charge of this material. In cooking, weights and measures are learned. The children also keep accounts of the cost of ingredients. Proportions are worked out in the cooking recipes. When the children dramatize the life of the trader, in connection with history, they have opportunities to use all standards of measurements. Number is demanded in almost all experimental science work; for instance, the amount of water contained in the different kinds of fruit, or the amount of water evaporated from fruits under different conditions (in drying fruits). All plans for woodwork are worked to a scale and demand use of fractions. When the children have encountered many problems which they must solve in order to proceed with their work, they are ready to be drilled on the processes involved until they gain facility in the use of these. The children should be able to think through the problems which arise in their daily work, and have automatic use of easy numbers, addition, subtraction, multiplication, short division, and easy fractions.

English.—(1) Literature: Poems: Robert Louis Steven-

son, "The Land of Story Books," "The Little Land," "North-West Passage," "Travel," "Where Go the Boats," "Escape at Bedtime," "Windy Nights," "Foreign Lands," "Fairy Bread," "Farewell to the Farm," "Looking Forward," "The Fairy Folk," Robert Bird (*Posy Ring*); "Is the Moon Tired?", C. Rossetti; "The Wind and the Moon," George MacDonald; "Robert of Lincoln," Bryant.

Stories: the saga of King Harold the Fair-Haired, the *Volsunga saga*, and the sagas of Eric the Red and Leif Ericson told and read to the children; the *Odyssey*, parts read by children from Palmer's translations, parts read or told by the teacher; Norse myths: "Thor's Journey to Jotunheim," "The Death of Balder," "The Gifts of the Dwarfs," and others (Mabie's *Norse Stories* are recommended); Greek myths and hero-stories: "Apollo and the Python," "Hermes and the Cave of Winds," Perseus, Theseus, and Hercules (Hawthorne's *Wonder Book* and Kingsley's *Greek Heroes* are used). Fairy-tales to be told: "The Land East o' the Sun and West o' the Moon," "The Twelve Wild Ducks," Dasent's *Popular Tales from the Norse*. Fables: "The Country Mouse and the City Mouse," "The Man, the Boy, and the Donkey," "The Fox and the Grapes," "The Shepherd and the Wolves," and others from Aesop.

Poems and stories with which the children are familiar from previous years will be used constantly in the story-telling time.

(2) Oral reading: Poems and stories, of the greatest literary value, which at the same time are easy enough for the children to read, are selected for oral reading; they are studied especially with a view to rendering them in a beautiful way to others. All of the selections from *A Child's Garden of Verse*, some of the fables, the selections from the *Odyssey*, and the sagas are included in the oral reading.

(3) Reading: For some of the children considerable phonic drills and reading of very simple stories are necessary. Others use silent reading mainly for study in science, history, and geography, oral reading being used only for social purposes. At the end of the fifth year in school (third grade) the children should have acquired ease in reading whatever thought-matter

is adapted to them, and in giving an intelligent oral rendering of the same.

(4) Writing: The children have many opportunities to feel the need of writing, which cause them to use it for reasons which they themselves think valid. Written expression is used in the following instances: (1) note-taking (*a*) while experimenting, (*b*) while on excursions, (*c*) while studying books; (2) notes written up to present to the class; (3) dictation: (*a*) recipes for cooking, (*b*) directions for experiments; (4) original stories and verses; (5) invitations, letters; (6) to give direction for work to other children. In writing, the pupil needs many words which he cannot spell. The teacher writes them on the blackboard, or the child looks them up in his "dictionary"—a notebook in which each child writes the words he has misspelled or asked for in previous lessons. This dictionary, consisting of words which the child actually needs and uses constantly, becomes a spelling-book, if so it may be called, the children often taking it home to learn the words. When a paper is read aloud and the class does not gain the thought which the writer desires to convey, the language is reconstructed by the help and criticism of the other children. The use of punctuation marks is discovered, and rules for the use of capitals, etc., are established. The oral as well as the written language of the pupils is constantly corrected.

Art.—Drawing and painting: This is a year when the children make a rapid transition. Up to this period they put meaning into crude symbols, showing but little discontent with the crudeness of the effort. After this age they rapidly take an objective interest in their drawings. Their imperfections discourage and disgust them. It is important that the subject-matter should lead to a closer visual analysis, and that it should be of such a nature as to enable the children to "check up" their results by comparison with real things. The nature-study, with its wide range of interests, offers a class of subjects by which visual as well as aesthetic powers may be developed.

Clay-modeling: Vases, jars, and bowls for flowers. Having become familiar with some characteristic Greek and Norse

designs, the children often choose these for their own purposes. Statuettes illustrative of the work in nature-study, history, and literature are made.

Textiles: Making of bags for school purposes, field excursions, etc. Designing and making of portière or window curtains with design in appliquéd. Further experiments in dyeing and pattern-weaving.

Woodworking: At the beginning of the second half of the year the time scheduled for woodworking is devoted to the construction of portfolios—an exercise valuable not only for the concrete result, but also for the careful measurements involved. As a natural sequence, library fittings may follow, and pen-holders, trays, paper-knives, desk-boxes, blotting-pads, and paper-files constructed from wood. These are the personal property of the children who make them, and may be taken home or donated to the school for use. The tools involved in the construction of these articles are the plane, ruler, trysquare, saw, hammer, gauge and mallet, bit and brace, spokeshave, and file. The children are expected to have acquired a fair degree of skill in the use of tools previous to this year, and the articles are designed with reference to a natural sequence in the use of the tools and the increasing power of technic on the part of the child.

Music.—Sight reading is introduced in this grade by means of short and simple exercises. A musical value is given these by the addition of a piano accompaniment after the reading is accomplished. Phrases chosen from familiar songs are notated. Rests, whole, half, quarter, and eighth are used. Rote songs are taught for assembly singing.

Gymnastics.—Marching, running, fancy steps, postural work and breathing, and jumping and games. Work still imitative, but increasing importance attached to proper respect for command and response to it. In increasing the emphasis upon the advantages of method and system, begin methods of formally placing the class on the floor for postural work. All formal work still accompanied by music. Begin games of low organization, and simple games of competition and co-operation.

Dancing.—First ten positions with the feet; bow; grand right

and left; waltz and two-step in couples; galop in couples; galop square, polka square.

FOURTH GRADE

In this year the improvement in technique should be marked. The basis of this improvement is to be found in the growing power of the children to criticize their work and in their desire for increased skill. Skill in reading, writing, and number is now sought as a means to an end—that of acquiring knowledge of history, geography, and natural science. It is also in itself a source of satisfaction.

During the previous years the children have studied some of the conditions that bring people together in a city. In the sixth year they trace the growth and development of their own city, Chicago. It is necessary to make a study of the present physiographic conditions; for Chicago represents man's struggle with his environment.

History.—The approach to the study of Chicago is through the consideration of the early French explorers and early settlers of the Northwest. This continues the study of explorers made in the third grade.

First half-year: (1) Early French settlers—their motives: (a) religion, (b) adventure, (c) acquisition of territory. (2) Industries naturally developed on the St. Lawrence: fishing, fur-trading, and trapping. (3) Story of Marquette and Joliet. (4) Story of LaSalle and his attempts to establish a chain of forts in the country south of the Great Lakes, and to control the fur trade; development of trading-posts at Kaskaskia, Detroit, Vincennes. (5) Fort Dearborn: (a) development of trading-post; (b) building of fort; (c) coming of pioneers.

Construction work: (1) Marquette's at Michillimachinac; (2) Fort St. Louis at Starved Rock; (3) Fort Dearborn.

Second half-year: Civics. Chicago as a village—development of the city: (1) streets and bridges; (2) water supply; (3) sanitation.

Geography.—First half-year, first six weeks only. Special point: agencies which change topography. Excursions to (1)

South Shore: (a) formation of sand bars, lagoons, swamps, and ridges; (b) reasons for piers; (2) swamps: conditions for formation and change; (3) Dune Park: (a) formation of dunes and swamps; (b) cause of succession of dunes; (4) Beverly Hills: special features—forests, wide ravines, swamps, and prairies.

In connection with history: (1) the St. Lawrence and Mississippi basins; (2) geography and topography of Illinois: (a) the old river routes; (b) appearance of the country; (c) routes to the East.

Lumbering (*see "Woodworking"*).

Second half-year: (1) study of mining (*see "Metal-Working"*). (2) Study of clay (*see "Modeling"*). (3) Special study of Mississippi basin industrially considered: (a) cotton belt, (b) grain belt, (c) sugar-cane belt, (d) rice belt, (e) grazing belt, etc. (4) Excursions.

The last six weeks will again be devoted to excursions. Special point, ravines: (a) Thornton, (b) Beverly Hills, (c) Fraction Run, (d) Glencoe—character of beach.

NOTE.—For reference each child owns Carpenter's *North America*.

Nature-study.—(1) Animal life: The children build squirrel boxes in the garden and have special charge of a pair of gray squirrels. The question of taming them leads to a close study of the habits of these and kindred animals. (a) Prehension of food, comparison of prehensile organs, nature of food, ways of obtaining it, are some of the points for comparative study. (b) Birds: habits of winter birds, children placing suet, meat, and grain for them; relation of claws and beak to food-getting. (c) Insects: grasshoppers, lady-bugs. (d) Spiders. (e) Earthworms: place in boxes; observe relation to soil.

(2) Garden: The children have charge of our flower-beds, the ivy and climbing-roses in front of the school building, one flower-bed and an herb-bed in the school garden, bulbs for spring and winter blooming, six large window-boxes outside the windows, and three boxes inside. In explanation of problems which arise, the following experiments are performed:

Those explaining (a) the relation of light and heat to growth

under perfectly natural conditions; (*b*) germination and rate of growth in various soils with similar conditions; (*c*) effect of roots on rock; (*d*) ways of getting moisture; (*e*) relation of moisture to growth of root. Buds: examine; note modes of protection. Grafting fruit trees and house plants. Twigs of common trees: (*a*) find comparative growth for several seasons; (*b*) note modes of protection.

(3) Excursions: Excursions are made to (*a*) the Wooded Island, (*b*) South Shore, (*c*) Glencoe, (*d*) neighboring swamps, (*e*) Beverly Hills. Special points for observation: (*a*) plants—recognition of known species, identification of some new ones, where found, the nature of the soil, mode of growth, relation of seed to plant, meaning of color in fruit, meaning of shells on nuts; (*b*) observations of animals' life as noted under the first heading.

(4) Meteorology: (1) Slant of sun's rays; measurement taken weekly. (2) Average temperature; daily record taken at 9, 11, and 1 o'clock. (3) Direction of wind at the time noted above. (4) Relation of direction of wind and slant of sun's rays to temperature.

Mathematics.—In the correlation necessary to the general work, the following should be the outcome in arithmetical knowledge:

1. Familiarity with the use of the multiplication tables through the 12's. These tables should be learned through use and by building them upon compound numbers, as (*a*) 4 quarts = 1 gal., how many quarts in 2, 3, 4, 8, etc., gallons?; 4 pecks=1 bu. etc.; (*b*) use of clock-face; (*c*) dozen and half-dozen; (*d*) ounce and pound. Extending the multiplication tables by means of checked paper (graphs) to the conscious use of the simplest algebraic expressions as : There are 7 sq. in. in 1 row, 2×7 sq. in. in 2 rows, 4×7 sq. in. in 4 rows, on to $x \times 7$ sq. in. in x rows. Also: There are y sq. in. in 1 row, on to $7y$ sq. in. in 7 rows. Possibly this may extend to xy sq. in. in x rows.

2. Analysis of numbers: factoring, addition and subtraction facts. These may also be shown on checked paper (graphs).

3. Study of U. S. money in accounts, making out simple bills, bill forms, and receipts.

4. Averages: This may be taught in two ways: $\frac{a+b}{2}$ and $a - \frac{a-b}{2}$, $b + \frac{a-b}{2}$; shown by checked paper (graphs).

5. Simple fractions and decimals in connection with manual training and nature-study.

6. Linear, square, and cubic measure in study of ventilation and gardening.

7. Ability to add, subtract, multiply, and divide whole numbers as rapidly as is consistent with the general development of the individual.

English.—(1) Literature: Story of Siegfried. This is read and told by the teacher from William Morris, *Sigurd the Volsung*. The children also read "Aladdin, or the Wonderful Lamp," "Ali Baba, or the Forty Thieves," "Sinbad, the Sailor," from Mabie, *Stories Every Child Should Know*; Hawthorne's *Wonder Book* and *Tanglewood Tales*; Kingsley, "Greek Heroes;" and Kipling's *Jungle Book*.

(2) Reading in connection with history and geography: Catherwood, *Heroes of the Middle West*; Baldwin, *Discovery of the Old Northwest*; Eleanor Atkinson, *History of Chicago*; Jennie Hall, *History of Chicago*; Carpenter, *Geographical Reader: North America*.

(3) Special oral reading, and dramatic art: (1) dramatization of a part in the celebration of the yearly festivals. (2) Study of a group of celebrated horse-back rides in literature: (a) "John Gilpin's Ride;" (b) "How the Good News Was Carried from Ghent to Aix;" (c) "Sheridan's Ride;" (d) "Paul Revere's Ride." (3) Other poems and dramatic stories which develop the power to express intelligently the reader's interpretation of the author's meaning.

(4) Writing: The demands for writing are numerous. Papers are written for (1) records of (a) science work, (b) excursions, (c) cooking; (2) stories; (3) letters; (4) invitations; (5) expense accounts; (6) songs. The skill to be acquired through this demand is: correct use of capitals, periods, interrogation point, and quotation marks; the use of the apostrophe; some uses of the comma; simple paragraphing. Spelling: the plan suggested in the third grade is followed.

Art.—Drawing and painting: (a) Subject-matter. (1) Landscape: *a.* immediate landscape, showing weekly change; *b.* typical areas visited. (2) Trees and plants—from these areas. (3) Illustrative work in history, etc. The technic is constantly improved, or there is dissatisfaction with the work. (b) Design. The crafts in which the children engage form the basis of the design. The emphasis is placed on the following technical points: form, proportion, and spacing; the decoration of the rectangle and the circle; straight lines and simple units used in borders.

Modeling: (1) Pottery—i. e., vases, jars, tiles, etc. (2) Tiles illustrating in high or low relief a scene from literature. Excursions: Marshall Field's and Burley's, to see pottery exhibits; Art Institute; Teco potteries at Terra Cotta. (3) In connection with prehension of food each child will model some animal in the round. (4) Tiles for window-boxes in frames of metal or wood.

Woodworking: First half-year: (1) Desk-boxes, fern-stands, doll furniture, etc., for Christmas presents, made in hardwood, in which the child meets the same problems of previous years; (2) a hardwood screen and other articles needed by the school.

Science: A collection of woods representing the trees of the environment is cut and polished to show the graining. Lumbering: (1) life of the people engaged in it; (2) their work; (3) the preparation of the wood for use; (4) trees used for other purposes—rubber, maple, etc.; (5) location of the great forest areas of the world.

Metal-working: Second half-year: The third grade has studied the use of metal in the beginning of trade and barter. Here it is taken up as a material in which the children can express themselves socially and artistically. They (1) hammer from sheet copper such articles as bowls and trays; (2) or make articles which call for sawing and etching, as book-ends, letter-files, calendar-frames, picture-frames, etc. Science: Simple experiments in smelting. Geography: Mining; the life of the miner; the source of the ore; the preparation of metal for use; the location of mines.

Music.—Sight reading of the simpler songs is introduced. Familiar songs are notated. A preparation for two-part singing by means of rounds and scale exercises is given. Emphasis is laid upon time problems in exercises. Arbitrary rules for finding the keynote with any signature are given as preparation for later scale-analysis. The more difficult songs are given by rote.

Gymnastics.—Lesson plan same as for third grade. Proportion of lesson given to formal exercise increases. Shorten reactions by the addition of commands while running. Dumb-bells and wands introduced in postural work, also combination of movements demanding finer discrimination and co-ordination. Begin games of a higher type of co-ordination.

Dancing.—Waltz; two-step; polka; galop; folk-dances; clap dance; sailor's hornpipe.

FIFTH GRADE

The children in this grade are still very active and their interest continues to center in people, and in people in action. They have a keen love of adventure. Their work should give deeper meaning to their own activities by contrast with the activities of others.

History.—The Pilgrims in America, their relations with the Indians, and their life amid primitive conditions appeal to the child's spirit of adventure. Not only is the life amid these conditions of vital interest, but the beginnings of the improvement of them are equally interesting, and the substitution of the candle for the pine-knot, and of the rug for the sand floor, leads to a study of colonial industries and investigation as to the best methods of production. The greatest value of interest in work is secured by presenting to the pupil subjects for study in some relation to his own life and experience. He expends effort, and realizes to a degree the effort which must have been made by all pioneers to produce more comfortable living; and this is a great factor in enlarging his social interest.

By repeating the experience of other peoples, he is not only interested in their life, but in weaving and cooking, and in candle- and soap-making, he satisfies his own desire for activity,

also. The mere doing generally satisfies him, and care in manipulation comes only after he has failed by careless work to produce good results.

Study of the Pilgrims: Plymouth Harbor is modeled in sand, and the town constructed on the sand-table, including Governor Bradford's house, the fort, the town brook, Leyden Street, Priscilla's home, and Burial Hill. The story continues with Governor Bradford's "Journal" as a basis, and the children read Nina Moore Tiffany's *Pilgrims and Puritans*. The study of the New England home includes the houses and furniture, fireplaces and furnishings, preparing and serving meals, spinning, dyeing, weaving, and making candles and soap. During the study of Pilgrim life, and because of the historical setting obtained, Longfellow's *Courtship of Miles Standish* is read.

The Virginia colony: The study of the Virginia colony begins with the plantation as contrasted with a New England farm. After describing the large plantation, with its great fields of tobacco, many laborers, mansion house, river, wharf, and the ship from England with its freight of manufactured articles, the causes for the difference between the life in Virginia and in New England are seen. This leads to the reasons for the introduction of slave labor, and the effects upon later history are very simply traced. The causes of the colony and events connected with the history of its founding are studied. The children construct a miniature plantation.

The New York colony: Hans Brinker furnishes a vivid picture of life in Holland, and the siege of Leyden illustrates the character of the people. The characteristics of the colony are studied and compared with those of New England and Virginia—occupations, classes of society, labor, education, government. A miniature New Amsterdam on the sand-table, and drawings of scenes in old New York, illustrate the work. The *Legends of Sleepy Hollow* and *Rip Van Winkle* are read, and the latter dramatized by the class.

Some functions of our own civic government are contrasted with similar functions of colonial government: the work of the fireman with that of the "bucket brigade;" the work of the

policeman with that of the tithing-man and other officers. The development of modes of illumination from the use of the pine-knot to electricity is traced. This continues the civic study of the sixth year.

Geography.—The general work in geography is a study of North America. During the first half-year the geography is closely allied to history, which is a study of the colonies (*see "History"*). A general study of glaciation is made with special application to New England. From a knowledge of the rocky soil, and also through the use of pictures and descriptions, the class studies the rivers, forests, hills, boulders, water power, and climate of the region, in relation to the principal industries—manufacturing, agriculture, and fishing. Excursions are made to Stony Island, where the influence of the glacier on bed-rock and glacial drift can be seen, and to Purington and North Shore for larger deposits. The location of many towns and cities, as determined by topographic causes, is noted. Other sections of the country are studied by different groups of children, who work out characteristic occupations of the areas and present to the class the results of their work.

During the second half-year the study of the entire continent, including the polar and tropical regions, is continued. Visits are made to industrial plants in or near the city, which supplement the work of the classroom. A part of the work in home-economics is cooking of cereals, and the work is supplemented by a study of the location and areas devoted to the raising of the grains which the children cook. In the work on New York history, constant reference is made to Holland, and, in order to make this work more vivid, the general geography of Holland, including the subjects of erosion, formation of islands, and transportation of soil, is studied.

During the entire year current geography has an important place in the curriculum, and a period each week is devoted to current events.

Nature-study.—This class makes a special study of a swamp in its different aspects and relations. There are several low swampy areas near the Midway, and more extensive ones

within easy reach along Stony Island Avenue. The children visit the swamp often, taking note of the changes in plant and animal life from time to time, and explaining the changes by showing the interdependence of the various forms of life. Frogs, toads, snails, snakes, and fishes may be introduced into the vivaria the children may establish in the schoolroom. The study of the swamp involves such topics as: the food of the swamp animals and their dependence upon plants; the "balance of life" between animals and plants; the changes in the flora and fauna due to changing character of the swamps; the ways in which swamp animals and plants survive the winter; the temperatures of the ground at different depths; the temperatures of the air; etc. The children, as far as possible, solve their problems by experimentation, as well as by reference to the books in the school library and at home.

The expression of the changing phases of the swamp takes the form, among others, of paintings, made at regular intervals. The complete set of these is a history of the swamp in color for a year.

Many problems in meteorology grow out of the work; the application of the principles learned is made to the country as a whole, in the study of the geography of North America.

Home-economics.—1. Cooking: (a) Preparation of food for winter use; making of jelly, canning of tomatoes, drying of corn and beans from garden, making of vinegar; (b) Preparation of dishes to illustrate colonial history; as hominy, corn pone, baked beans, brown bread, baked Indian pudding, succotash; (c) Review of starch cooking in the preparation of cereals and of vegetable soups, and of sugar cookery in the making of maple sugar and Christmas candies; (d) Cooking of eggs to illustrate the principle of proteid cookery. Combinations of eggs with starchy foods.

2. Science: (a) Study of cereals as an important food product of our own country (*see "Geography"*). Their value as food; distribution; conditions of growth; cultivation; milling. Visit to flourmill. (b) Review of starch test and finding of starch in foods. Sugar test and finding of sugar in vegetable

foods and milk. Cooking temperature of albumen. (c) Soap-making: leach lye for food ashes; test properties; let it combine with oil to form soap. The class makes hard soap and soft soap. Visit soap factory. (d) Candles: Work out conditions under which oils and fats burn, and study different kinds of wicks as to volatilization of oil. Make candles of tallow and paraffine. Discover use of chimney. Visit a candle factory.

Mathematics.—The number work of the year is correlated with other studies. The four fundamental processes are studied especially, and simple problems performed in fractions, common and decimal; garden: linear and square measure; material for looms and Christmas gifts—linear and square measure; cooking—addition, subtraction, multiplication, and division of fractions; dye for textiles—fractions and metric weights; supplies for school use—United States money. In the study of areas and of factoring the cross-section paper is used.

English.—(1) Literature: The literature of this grade is Pyle's *Robin Hood*, Irving's *Rip Van Winkle* and *Legends of Sleepy Hollow*. *Rip Van Winkle* is dramatized by the pupils and put upon the stage at one of the morning exercise periods.

(2) Writing: By means of the writing in cooking, history, and science, it is expected that the class gain a free and correct use of English. The pupils formulate simple rules for punctuation, capitalization, and spelling, and write them in their notebooks. By analysis of the thought of their work in history, geography, and literature they gain a knowledge of sentence structure. In this year the children begin to use the dictionary—Webster's *Academic*. They also write simple verse and original stories.

Speech, oral reading, and dramatic art.—The interpretation of *Miles Standish* by the teacher; study and dramatization of *Rip Van Winkle*; dramatic training in the staging of the French and German plays. Poems of the seasons are interpreted to the children and some of them are committed and recited at morning exercises. This class takes an active part in the Thanksgiving festival.

French.—Songs and games illustrating manner of living, customs, and festivals in France; dramatizing of French Christmas play. Reading material is taken from *Jeux, chansons, et rondes populaires de France*. Masculine and feminine of nouns and adjectives, singular and plural forms, agreement of subject and predicate.

Beginning German.—Instruction oral to a great extent. Special stress is laid upon ear-training, pronunciation, etc. Special drill in phonetic spelling. The vocabulary to be acquired in this grade is based upon actions that can be executed by the children, or upon rhymes, riddles, songs, and games.

Formal work: Attention is called to the use of the definite and indefinite articles, the different pronouns, the verb endings in the present tense, the singular and plural of nouns which occur.

Art.—The work is the beginning of a somewhat more conscious study of the aesthetic elements of art expression. These are developed in both the formal decoration of wood and textiles, and in the drawing and painting which arise from various subject-matter. The use of color opposites is studied.

First half-year: Weaving, on small hand-looms made by the children, belts or hand-bags or table mats. This problem includes the designing of the pattern to be woven and the dyeing of the yarn. In connection with this work the children study the processes used in weaving and dyeing by the early American colonists and make experiments in spinning wool and flax on spindle and wheel.

Second half-year: Making of portfolios, for cooking recipes or French and German exercises, covered in linen with decoration stenciled on cover. The children make a study of the different materials used in clothing, of the manner of production and preparation for use.

Woodworking: Second half-year: The use of woodworking is especially to re-enforce the other subjects. With the Dutch history as a basis a study is made of the characteristics of the Dutch house and furniture. Excursions are made to furniture shops for purpose of identifying Dutch furniture, and

simple illustrative articles are made in the manual-training room. Simple mechanical drawings are made by the class.

Music.—Rote singing is continued; the singing of rounds begun in previous year is continued, both by note and with the words, and simple two-part songs are introduced throughout the year; the beginning of scale structure is taught, and a development of the rules for finding keynotes in the sharp keys; original songs are written and notated.

Physical exercises.—Further development of volitional control through problems in new co-ordination in postural and apparatus work and jumping are sought. This age of children demands the addition of antagonistic and competitive work which requires special adaptation of running, vaulting, and jumping exercises. Games involve increased endurance and skill.

Dancing.—Waltz, two-step; galop; polka; three folk-dances: London dance; sailor's hornpipe; clap dance.

SIXTH GRADE

The children are interested in the many industrial and commercial problems arising in the city around them. Their father's business appeals to them; they visit his office or shop; they do shopping, and have a general interest in commercial values. The alien peoples about them suggest questions that carry the children into geography and history and civics with real zest. Questions of government are becoming interesting to them. They have a tendency to generalize in this as in much of their thinking. They are organizing their artistic and aesthetic tastes.

Civics and history.—This group of children helps very materially in making beautiful the school grounds, having charge of the flower-bed and urns in the court. Out of this grows an interest in the general work of beautifying the place in which we live. At this time children are alive to the problems of government in the concrete, and are beginning to enjoy something of the science of government. The outcome of these interests is a study of the work of our "civic improvement" societies, and Athens is taken as a type of the "city beautiful."

The children's interest in our own problems of government, and their desire to know more of the foreign people around them (which is given at length under "Geography"), make desirable and profitable a study of a people other than the English in the exploration and settlement of America. The French life in the early days in Canada and the Mississippi Valley is full of many simple, beautiful stories of the hunter, the trapper, and the priest guiding his own people or teaching the Indian, which give the children a feeling for the French people, and an appreciation of the difference between the French life, social and political, and that of the English and our own.

History.—A study of civic beauty; how to make our city beautiful; what the civic improvement societies of our city are doing. Greek history: Athens as a beautiful city; Greek education, music, art, games; Greeks' struggle for liberty. The *Iliad* is used as the foundation for this work.

The French in America: conditions, geographical, social, and political, that led to their coming; their fishing industries in the New World, Cartier on the St. Lawrence, at Stadaconé, and Hochelaga. Fur-trade monopoly, DeMonts and Champlain in Nova Scotia. Champlain on the St. Lawrence; Quebec, Montreal, summer fairs; trapper, soldier, explorer, missionary; church, school, seigniorage. Spread into Great Lake region and Mississippi Valley; contact with the English in the Ohio Valley. In much of this work the children are in touch with the original papers, journals, diaries, and letters of the Frenchmen as found in Champlain's Journals and other source material.

Comparison of French and English colonial life; account for difference in government. French and Indian War—the importance of its results.

Growth of English colonies: industrial development; hand and home manufacture; growth in factory system; lumbering; ship-building; manufacture of barrels, linen, paper, etc.; trade with West Indies and Europe; Navigation Acts. These acts and internal taxation lead to the Revolution; results, the birth of the nation.

Sand-modeling, map-drawing, clay-modeling, painting, and story-writing help the work. In the Greek work the clay-model-

ing is significant (*see Clay under "Art"*). Woodwork helps toward an appreciation of colonial homes, through study of furniture and building of the times.

Home-reading: Andrews' *Ten Boys on the Road from Long Ago to Now*; Guerber's *Story of the Greeks* and Hall's *Men of Old Greece*; Kipling's *Captains Courageous*; Martineau's *Peasant and Prince*, Weir Mitchell's *Hugh Wynne*.

Geography.—The children are coming in contact with foreign people at school, at home, and in the great city outside; they are seeing products of foreign countries in the stores as they go shopping alone or with their parents; they or their parents have traveled abroad, or are anticipating such travel. The scope of their interests is great enough now to include the many people and countries contributing to the life around them. They are ready to see the interdependence of peoples; to appreciate the contributions of nations to progress, material and otherwise—are really very open-minded and sympathetic in this direction. At this time much can be accomplished by a somewhat thorough study of foreign people here in our city, and in their own countries abroad. If this study is deferred a year or two, the children's questions are answered haphazard outside; the children make abstractions and come to wrong conclusions, which the truth, learned later, does not always eradicate. So, to satisfy the demands of the children at this time, Eurasia is studied.

Eurasia: Physical features: great mountain systems, plateaus, plains, and rivers. Climatic features: tundras, forest belt, steppes, desert belt; characteristic products of each; effect of each upon human life. Regions of wheat, flax, etc.; grazing, mining, etc. A general picture of the great continent.

We see the three great civilizations: the European, pressing ever on and on over the great western peninsula, and even across the sea to the New World; the Chinese (Japanese, Corean), clinging in the past to its own soil and looking backward, with its wonderful background of written history; the Hindu in the southern peninsula, looking to the spiritual, living in the future life, as it were, leaving only buildings to tell its past.

A study of France, England, and Greece, somewhat in detail,

is made in connection with history. The European is studied as a traveler, a discoverer, an explorer.

Our commercial relations with the leading countries of the continent are emphasized, and a study is made of special food products.

Sand models, chalk models, maps, drawings and paintings, and excursions to the Field Museum, Art Institute, Stony Island, and Dune Park are an integral part of the work.

Nature-study.—1. This class makes a study of birds. The children make frequent excursions to the Wooded Island of Jackson Park. Other wooded areas, such as Beverly Hills, are visited occasionally. Attention is paid to the changes in the nature picture, and frequent records in color are made. The children make a bird calendar, showing the date of the first appearance of each kind of bird, and explain as far as possible the migrations of birds by discovering the nature of the food of the birds.

Arbor and Bird Day is a special feature of the spring work. Excursions to Stony Island, and Dune Park (*see "Geography"*).

2. Mechanics: Simple machines in use at school, at home, and on the streets; universal principles in machines; find lever in many phases; construction of simple machines.

3. Garden: Study of fertilization. Care of beds of flowers and strawberries.

Home-economics.—First half-year: 1. Cooking: Canning, preserving, and pickling of fruit as a beginning of the study of fermentation. Yeast bread as a type of fermentation.

Other methods of lightening doughs and batters: by air in sponge cake, steam in "popover," baking-powder in biscuit, shortcake, and cake. Use of soda with sour milk and molasses, as in gingerbread.

Making of tea and coffee: Study of tea, coffee, and cocoa—their cultivation, conditions of growth, and commercial importance, as illustrating the contribution of other lands to our food supply (*see "Geography"*).

2. Science: Yeast, molds, and other germ life; conditions of growth of yeast, as food, temperature, moisture. Yeast seen under the microscope. Products of fermentation; carbon diox-

ide. Acid and alkaline substances (in connection with baking-powder). Expansion of gases; change of water into steam. Uses of water in cookery. Determination of the amount of gluten in flour. Visit to bakery.

Mathematics.—Mensuration: rectangle, triangle, trapezoid, parallelogram, polygon, circle—their perimeter and area. Work in geography will demand knowledge of ellipse, foci, horizontal, vertical, and perpendicular, angle, degree, use of compasses and protractor, measure of latitude and longitude, difference of time between places on earth's surface. How to draw lines parallel to each other, how to bisect a line, how to find the center of a circle, are problems that have a place here.

Business problems—how business is done, values, gain and loss; geographical problems, scientific and commercial; simple discount expressed in per cent. This last arises in home-economics. Common and decimal fractions; emphasis laid upon the free use of the latter. Mathematical language, the equation; generalized number with formal statement of principles.

The work is strengthened by graphs on cross-section paper.

English.—1. Literature: The *Iliad* is the principal selection of literature for the year. We use Bryant's translation. The children read and tell stories from the *Iliad*, from books they may have or find in the library. Some books of the poem are left untouched, and others read only in part.

Prose and poetry of the seasons are read. Burroughs' "Signs and Seasons," "Wake Robin," "The Apple;" parts of Thoreau's *Excursions*; extracts from Bradford Torrey; Riley's "Dream of Autumn;" Whittier's "Fisherman;" and "Paul Revere's Ride."

2. Writing: Writing is part of the work in every subject; the aim is toward legibility, ease, and rapidity.

3. Spelling: Oral and written spelling of words heard and used; some attention to simple rules of spelling.

4. Composition: Composition in its various forms—narration, description, character sketch—grows out of the wealth of material in history, geography, nature-study, and literature, and in excursions, travels, and other experiences. The heroic in

history and literature and the beauty of nature often appeal to the poetic in the children, and the result is simple verse. The aim is to foster a desire to express, and to gain the power to express, interestingly and beautifully what one has to tell. Clearness and conciseness are emphasized in appropriate places. Choice of words, flow of sentences, style, in a simple way, are noted. Letters and invitations are written. Records of experiments, and recipes are written.

Speech, oral reading, and dramatic art.—Parts of the *Iliad* interpreted by the teacher to the class. Construction of a drama founded upon some of the incidents of the *Iliad*; the selection is determined by the feeling of the class. Dramatic training in French and German plays. Oral reading of parts of *Hugh Wynne*, of *Paul Revere's Ride* (review), *King Olaf's Christmas* and other Norse sagas, and Browning's "Herve Riel." Interpretation by the teacher of season poems. Some of these are committed and recited by the children. Interpretation by the teacher of Browning's "Pheidippides" and other poems; also of "The Ship That Found Herself."

This class takes an active part in the Christmas festival.

French.—Dramatizing scenes from the life of Francis I; original play of Jacques Cartier's visit to Hochelaga at Mount Royal. Scenes from the life of Samuel de Champlain, Pontrin-court, and Lescarbot at Port Royal. Reading of Lescarbot's *Adieu à la France*. Reading of historical and literary anecdote-book printed by ninth-year pupils. Christmas work taken from illustration of play. Reading and grammar work taken from *Jeux, chansons et rondes populaires de France*, and *The Dramatic French Reader*. Emphasis is laid on the first and second conjugations in the indicative and imperative modes, pronouns of the first, second, and third persons; demonstrative and possessive adjectives and pronouns.

German.—Vocabulary of the Fifth Grade is reviewed and enlarged. Topics: Activities of the day, meals, house and its different rooms, stores, animals, etc. Sight reading of stories from Foster's *Geschichten und Märchen*. Retelling and dramatization of stories.

There is more dictation work. The writing of original sentences is encouraged as well as the writing of memorized sentences, since this is found to be the best means of getting accuracy. Formal work: The principal parts of verbs are taught in connected sentences, singular and plural of occurring nouns, possessive pronouns and their use in singular and plural.

Art.—Drawing and painting, and design: Landscape, to show change in nature. History, geography, and literature call for expression in pencil and color. Notes taken on excursions are material for composition in color; particular trees and flowers are studied in detail. Designs for pottery, textiles, and wood are worked out. Emphasis on invention; composition of plant and animal forms. Clay-modeling: First half-year: Building of pottery, modeled after Greek vases. The figure in decorative composition after Greek studies.

Textiles: The children make a study of primitive forms of weaving, used by the Zuni and other Indians. They have a general summing up of the knowledge gained in previous years, in order to realize something of the evolution of clothing, and the arts of spinning, weaving, and dyeing, and to compare primitive with modern methods. They may also design costumes for dramatic work—Greek, colonial, French, and Indian.

Woodworking: Second half-year: The study of colonial history by the children of this group suggests the opportunity of making a brief study of colonial furniture. Its chief features are taken up: (a) the principal articles of furniture in a colonial house; (b) the kinds of wood used; (c) the characteristics of the "colonial style." An excursion is made to a leading furniture store for the purposes of further illustration and identification of colonial furniture. It is hoped that in some of the articles which the children make for the schoolroom, or the school, or for their own use, it will be possible to carry out simple outlines and designs suggested by the study of colonial furniture.

Free-hand sketches for outline and proportion precede the making of all articles in wood. These are followed by a working or mechanical drawing. A few blueprints are made

by the children of those designs which the class, as a whole, considers the best.

Music.—Considerable attention is given to sight-reading, both in unison and two-part songs; thorough drill in signatures and keys, and in scale writing; original songs written and notated; some rote singing is done. The children of this grade, in connection with their historical study of the ancient Greeks, have opportunity to hear some of the music of the Greek people, to help them in their understanding of conditions in early times, and in the writing of the original songs for the Greek play.

Gymnastics.—Lesson plan the same as that of the fifth grade. Additional control of distance and direction in running and marching; increased mental and physical values through tactics executed without music at command. Training for increased dexterity and alertness through introducing insistence upon form, as well as uniformity in the details of changing the direction of facing or position of the class upon the floor. Games still involve all players, but emphasize the elements of additional choice.

Dancing.—Waltz; two-step; galop; polka; square dance (“Prairie Queen”); Highland fling; lilt; gymnastic dancing for girls: (1) Highland fling; (2) cachucha; (3) Greek dance; (4) nursery rhymes.

SEVENTH GRADE

At the age of eleven or twelve the child is not so much interested in activities for their own sake as in their relation to the world-activities about him. In studying the different phases of the development of the United States, such as the development of the steamboat or the railroad, he constantly refers to the present and tries to interpret the significance of the present in the light of the past. This is the keynote of the work in history: the study of some of the social and economic questions of the past, in order to be able to interpret present-day problems. To be able to understand this, and to appreciate what is going on around us more fully, there must be a study of geography and the physical

sciences. In all this study there is a constant demand for mathematics, which must become, if it is not already, an efficient tool. The children are not yet able to generalize broadly, but are able to organize their knowledge in the solution of a problem. At this age interest in adventure is strong, and the reading for home and school follows this interest and seeks to develop a greater love for the good in literature.

History.—The history of the United States from the Revolutionary War to the present time is the year's work. Special features of the work: the geographical, industrial, and social phases of the expansion of the American people; the great westward movement which began with the early emigration to Kentucky and continued across the continent to the Pacific Ocean.

Pioneer life: The child's conception of life on the frontier is built up from a study of such topics as the following: the migration of a family across the mountains to Kentucky; the cause of the migration; the possible routes across the mountains; the geographical factors involved in choosing a tract of land for a farm; the clearing and tilling of the land for a farm; the necessity for some form of community life; Daniel Boone as a type of the early explorer and pioneer; the governmental problems presented to the pioneers and their solutions; the settlement of Kentucky and Tennessee; the work of George Rogers Clark in saving the Northwest territory to the United States; the settlement of the Northwest Territory; the Ordinance of 1787; the Ohio Company and other land companies in the settlement of Ohio.

Reading: Extracts from original sources; two of the following: Thwaites, *Daniel Boone* and *How George Rogers Clark Won the Northwest*; Churchill, *The Crossing* (first part).

Economic and industrial conditions in the West. Topics to be considered: the demand for a market, and for the right to navigate the Mississippi River; the purchase of Louisiana Territory, improvements in transportation by invention of the steam-boat, and the building of national and local roads and canals; the War of 1812, a struggle for commercial independence; the expedition of Lewis and Clark; the growth of the slavery questions, including the Missouri Compromise and the annexation of

Texas; the development of railroads; the effect of railroads and steamboats in the development of the trans-Mississippi country; the discovery of gold in California; the Oregon country; the economic conditions leading up to the Civil War; the geographic factors in these conditions; the Civil War; the great industrial revolution following the Civil War; the factory system; the industries of the North and South.

Reading: Extracts from original sources; three of the following as home reading: Lighton, *Lewis and Clark*; Kinzie, *Wau Bun*; Brady, *The Conquest of the Southwest*; Parkman, *Oregon Trail*; Irving, *Astoria*; Hale, *The Man without a Country*; Taylor, *Eldorado*; a biography of Lincoln.

Excursions to a farm, railroad shops, and other industrial plants, are made.

Geography.—1. North America: The study of North America begun in the Fifth Grade is reviewed here from the standpoint of the relation of the geography of the country to the history of the development of the people. Points considered: topography of the continent as a whole; the topographic divisions; the climate of each in connection with the daily weather maps of the United States Weather Bureau (*see "Science"*); the agricultural, mineral, and commercial advantages of each; state of development; the effect of these geographic factors upon the life of the people; the relation of the geography to the history. Blackboard chalk-modeling of topography; field trips and the geographic laboratory are used as aids in the study of physiographic processes. Maps, pictures, lantern slides are also used.

2. South America: A continent similar to North America in structure, but differing in its climatic conditions, hence differing in its agricultural, commercial, and social relations. The same general plan is followed as in the study of North America. The museum collection is used to illustrate the trade relations between Chicago and South America.

3. Africa: “The continent of contrasts” (Keane); a continent differing in structure from those already studied; a continent greatly retarded in its development because of its desert conditions, plateau formation, and slightly eroded river valleys.

Points to be considered and purpose to be attained are the same as in the previous study.

4. Australia: A continent similar to South America in location, but differing from it in climatic, industrial, and commercial features.

A study of current events continued during the year serves to unite all continents with our own. References for pupils: Carpenter, *North America, South America, Africa, Australia*; Shaler, *The Story of Our Continent*; books of travel; magazine articles. For textbooks, see list of textbooks on another page.

Nature-study.—This class makes a special study of trees, their habitats, and the character of the wood. Frequent visits are made to Washington Park and to Jackson Park to study trees. Each child keeps a history of the year in color, showing by frequent paintings the changing aspects of nature.

The class studies the principles involved in making hotbeds, and makes hotbeds and coldframes in the garden for the use of the whole school. The pupils plant new shrubs in the garden, including raspberries, blackberries, currants, and grapes, and are responsible for their care.

The nature-study and forestry bulletins of the United States Department of Agriculture and of the state experimental stations, as well as other books in the library, are of great use. A special study of the meteorological instruments of the school is made. Weather charts are kept for a while and the weather maps of the United States Weather Bureau are used in making out the weather and climate of the United States (*see "Geography"*). The principles thus learned are applied to the determination of the climate of the other parts of the world studied.

The longer excursions are to Dune Park, Glencoe, Palos Park, and Thornton.

Applied Science: First half-year—Electricity. Chief among the children's interests at this age is electricity. This is especially true of the boys. Because of this and its many applications along industrial lines it is given special attention at this time. Static electricity is not given much attention except from a historical standpoint. Each pupil is expected to plan and con-

struct electrical apparatus with which to experiment. Any of the following may be constructed: wet and dry cells, storage cells, batteries of both electro-magnets, a simple telegraph instrument, electric switches, buttons, motors, signals, a small trolley-car system, or an arc light. The telephone, the telegraph, wireless telegraphy, the submarine cables, the X-ray, the phonograph, and other electrical achievements, and the part each plays in our complicated social and industrial life receive as much attention as the children can appreciate.

Each pupil is encouraged to work along individual lines according to interest, previous experience, and ability. As the classes are working in wood in the shop at the same time that electricity is studied they are encouraged to execute their plans at school under supervision as well as at home in their own shops.

Excursions are made to the University electric plant, the Western Electric Company at 269 S. Clinton Street, and the annual electric show.

Hygienic physiology: Second half-year. A study of the respiratory, circulatory, and digestive systems with special reference to the application of the experience gained in the work outlined under "Home-Economics;" a study of the effect of gymnastic exercise, games, out-of-door life, and pure, wholesome foods, upon the growth and functions of the heart, lungs, and stomach.

In connection with the respiratory system we study experimentally the air: its composition; carbon dioxide; oxygen; and impurities. This leads up to (1) the problem of the proper ventilation of our homes, schools, street cars, and public buildings, and (2) the dust and smoke problems in cities.

This study does much to make the pupil (1) realize the value of his work in physical training, (2) reach a higher ideal of physical development, and (3) consciously apply some of the simplest and most fundamental laws of right living.

Meteorology: Constituents of atmosphere; effects of changes in temperature and air-pressure; the barometer; the United States Weather Bureau; the weather-recording apparatus in the

Elementary School; weather records kept by children as a basis for study.

Home-economics.—Second half-year. A study of different foods leading to the classification of food as: (1) carbonhydrates, (2) fats, (3) proteids. Application of heat to each of these food principles, and temperature at which each is cooked. Different processes of cookery reviewed with more definite organization of previous experience. Study of the principles of cooking apparatus, especially of gas and electric stoves.

Science: Heat, and methods of transmitting it. Comparison of conducting-power of different materials; effect of pressure on the boiling and freezing points of water. Tests for different food principles. Simple food analysis and the study of the composition of food with special reference to its nutritive value and the use of food in the body (*see "Physiology"*).

Mathematics.—The subject-matter for mathematics is selected as far as possible from the pupil's experience: from problems growing out of his activity in and out of school, and problems growing out of his study of the commercial and industrial life about him. This involves work in (1) arithmetical processes, (2) geometrical constructions and applications, and (3) algebraic representations of arithmetical processes and equations.

Arithmetical processes: (1) Through a study of the organization and operation of modern business institutions the pupils become familiar with the commercial transactions involved in banking, handling stocks and bonds, loans, promissory notes, interest, taxes, discount, insurance, and commission. This requires the solution of numerous problems demanding a knowledge of operations in percentage. (2) Ratio and proportion as related to field- and shop-work. (3) Constructions in cardboard and paper, and drawings and diagrams, to work out methods for field-work. (4) Volumetric mensuration: calculate cost of digging foundations, tunnels, and canals, filling for railroad constructions and elevations; finding area and volume of bins, boxes, railroad cars, and tanks; finding area and volume of cones.

Geometrical constructions and applications: (1) Working-drawings for manual training. (2) Representative drawings to

scale of tracts of ground; of farms, maps, field measurements.
(3) Designing for simple electrical and mechanical appliances. English and metric systems of weights and measurements used.

Algebraic work: (1) Syncopated algebraic laws of number and of mensuration formulated into equations by abbreviating words into letters, the resulting equations being read as sentences. (2) The use of the equation in percentage and interest. (3) Equations in ratio and proportion. (4) Solution of problems by both arithmetic and algebra.

Sufficient emphasis is given terminology for a clear and intelligent use of it. In all cases enough practice is given to fix the mathematical principles and processes involved.

English.—1. Literature: King Arthur Legends: the children read Lanier's *The Boy's King Arthur*, and selections from Mallory's *Morte D'Arthur*.

2. Reading: The books named under "History" for home reading.

3. Writing: When the children reach this year, they are expected to have the power to write legibly and easily. There is constant demand in history, geography, science, and literature for written reports, stories, and descriptions. The correction of these papers by the children requires a knowledge of the simpler rules of grammar. The papers are filed and furnish a record of the individual work.

Care is exercised to present the oral and written expression that should accompany the growth and complexity of idea. Drill is given in the forms and their use whenever the pupil feels a need for it, or whenever it is apparent that the form will not be learned without it.

Some facts in grammar are taught incidentally. The outcome of this work during the year should be a knowledge of sentences and sentence structure; subject and predicate; words, phrases, and clauses and their functions; parts of speech, with emphasis on nouns, pronouns, adjectives, and verbs, and functions of each.

Speech, oral reading, and dramatic art.—Old English and Scotch ballads, autumn lyrics, Browning's "Herve Reil;" Kip-

ling, "The Ballad of East and West." Interpreted to the children: Kipling, "The Explorer," Longfellow, "The Building of the Ship;" Lowell, selections from *Bigelow Papers*.

The reading and recitation of poems, orations, and other selections for the school festivals. The dramatic training required for the presentation of the children's English, French, and German plays.

French.—Printing of historical and literary anecdote-book for the seventh and eighth years from material prepared by pupils of the seventh and eighth years. Dramatizing and writing of scenes characteristic of Breton sailors and fishermen in connection with the reading of "Herve Reil;" photographs and postal cards from Brittany to be used as illustrations. Reading of French historic sketches selected and printed by tenth year; review of sixth, seventh, and eighth years' grammar record-book. First, second, and third conjugations, indicative, conditional, and imperative modes; gender and number of nouns and adjectives; exceptions to the general rule. Reading-lessons and grammar work taken from *The Dramatic French Reader*. La Fontaine's *Fables*.

German.—Topics of conversation; the activities during the different seasons; the holidays, as Christmas. Later the geography of Germany is taken up and in connection with this legends and historical tales or anecdotes referring to certain places in Germany.

Writing exercises as in previous years, with more stress upon careful reproduction of sentences for the sake of accuracy. This class will probably read Guerber's *Märchen und Erzählungen*, Vol. I.

Formal work: Review of the work done in previous grades, future of verbs, genitive case of nouns.

Art.—Drawing and painting: (a) Subject-matter. While the subject-matter of the grade is the source of the interests which are expressed pictorially, it seems wise not to attempt a wide range of subject. It is better to select such material as is suited to the technical ability of the class and affords opportunity for prolonged and concentrated effort. In this way the result attains a

dignity which is demanded by the more critical attitude of students of this age.

The technique of the seventh grade does not differ in kind from that of preceding grades. It represents an effort toward greater forcefulness.

(b) Design. This is based upon the experience which has been gained previously in the crafts, and hence does not depend entirely upon the initiative of those subjects. Creative exercises are organized so as to make the students conscious of the laws of pure design.

Clay: Second half-year. Making of pottery and the modeling of statuettes illustrating typical scenes and incidents in the life of the pioneers.

Metal-working: First half-year. The children hammer from sheet-copper and brass articles of social use, such as trays, bowls, candle-sticks; or cut and blend into shape such articles as book-ends, calendar-frames, picture-frames, candle- and lamp-shades. Designs are applied by means of etching, piercing, or perforating. This work necessitates riveting, and possibly soldering.

Woodworking: First half-year. Method: working-drawing for each construction; a careful study of plans and principles involved. Articles made for use in home or school, the pupil given a choice when practicable. The class designs electrical machines and apparatus (see "Applied Science"), demanding part of the construction in wood.

A study of the history and distribution of some important cabinet woods; characteristics of bark, branching, and leaves, by which trees may be recognized; grain and finish of woods; lumbering.

Music.—Two- and three-part songs read. Review of scales and key signatures is given. Chromatic scales are sung, analyzed, and written. Chromatic exercises are used. Songs with strong, musical inspiration are chosen for assembly singing. Pupils are encouraged to play or sing for one another in class, an opportunity for this exercise being given once each week.

Gymnastics.—Lesson plan the same as in previous grades. Girls and boys in separate classes. Marching and running as

well as postural exercises and apparatus demanding increased volition and concentration of attention; rhythmic exercises for the girls developing into folk-dances; tactics introducing an increasing number of evolutions, calling for greater concentration and alertness. This is a period of rapid growth—new functions develop, as well as large amounts of new tissue. Hence all exercises tend to special development of heart and lung actions, care being taken to avoid strain. Games of higher organization are added which prepare for team play and require endurance and develop judgment.

Dancing.—Waltz, two-step, square dance (“Prairie Queen”); Irish washerwomen; rejane; gymnastic dancing for girls: (1) Swedish weaving; (2) Spanish dance; (3) Greek dance; (4) lilt.

EIGHTH GRADE

It is planned to meet the needs of the pupils of this grade by presenting studies more reflective and comparative in character than those previously chosen, and by strongly emphasizing the social aspect of the work.

History.—The European history immediately preceding the discovery of America: Following the American history of the ninth year, the tenth year takes up that period of European history which immediately precedes the discovery of America. The work which centers about the Renaissance is selected because it is the background of American history; because it may be used in solving some of the social and governmental problems which appeal to these pupils; because the spirit of chivalry, service, and heroism finds a ready response in the adolescent years; because knowledge of the conditions which surround modern labor shows the value of the freedom in work which resulted in the art and architecture of the thirteenth, fourteenth, and fifteenth centuries. The subject is presented according to the following outlines:

1. The period of discovery and the growth of geography:
(a) Geographical knowledge previous to the fifteenth-century voyages; ideas of the Greeks and Romans. (b) The Crusades;

their effect upon the routes of travel. (c) The journeys of the Polos; increase of geographical knowledge and the breaking-up of routes of trade. (d) The invention of printing; books of the Middle Ages; mural paintings; effect of printing upon knowledge.

2. Feudalism and chivalry; the growth of feudalism; the life of the people; the growth of the church.

3. The guild system of labor contrasted with our modern factory system. Art: (a) The towns of the Middle Ages; their position on lines of trade; trade guilds. (b) Florence and Nuremberg—typical expressions of the thirteenth century; the cathedrals of Europe, illustrations of Gothic architecture. (c) Results of the guild system of labor—compared with modern factory system.

Geography.—In this year the class sums up the geography of the preceding years, including the physiography and political geography, but from a new point of view. The geographical conditions under which man is living on the earth, and the effect of these conditions upon his life, form the background of the work.

Starting with the world as a whole, attention is directed to the distribution of land and water on the earth, the mountain masses, the great plains, river basins, deltas, flood-plains, and coastal plains, the glaciated areas, tundras, and forests. This involves the study of the distribution of sunshine and heat on the earth, and the terrestrial winds. The children review their work of former years on weather and climate, and learn by experiment more definitely the principles of governing atmospheric pressure and winds and rainfall.

The class visits several of the large commercial stores and manufacturing plants, to learn what the different countries are sending us, and what we are sending them in return. This involves a thorough review of the commercial and political geography of the preceding years.

In the study of climate the class uses the meteorological instruments and records in the school museum, and makes a visit to the United States Weather Bureau Station in the Federal Building.

In studying the relation between the nature of a country and the lives of a people, constant reference is made to the books in the school library, to magazine articles, and especially to Herbertson's geographies, which are a series of extracts from the best books of travel.

The excursions are to the following regions: (1) Glen-coe; (2) Fraction Run, near Lockport, and the Drainage Canal; (3) Dune Park; (4) Thornton (*see "Nature-Study"*). On these excursions the class uses the contour maps of the United States Geological Survey (*see "Mathematics"* and *"Geography"*).

Nature-study.—This class has general oversight of the garden, with the specific work of mulching the beds in the fall, pruning the shrubs and trees, and guarding against injurious insects; it also makes a study of the relations of insects to plants. The beneficial relations are studied through the work of the bees in pollination, and the injurious effects through a study of the scale insects, the rose beetles, and the different moths. The deprivations of the harmful insects are combated with the various spraying mixtures, and in other ways.

During the year the class makes frequent excursions to Jackson Park to observe the changes which are taking place, and to make sketches of the landscape. Last year these sketches gave the *motif* for a large mural drawing in the classroom.

In the spring longer excursions are made in connection with the geography: (1) to the North Shore, to study the action of running water in making ravines, and the action of the waves and of the wind; (2) to Thornton, to study river valleys of a later stage, with broad flood plains; (3) to Fraction Run, a rock ravine; (4) to Dune Park, to study the action of the waves and the wind in making sand-dunes. The pupils study the development of the topography of the regions, the distribution of plants and animals found there, and the factors which control it. They also draw contour maps (*see "Mathematics"*), on which they locate these life-areas. They study the borderland which lies between these vegetation areas, to emphasize the constantly changing conditions—physical evolution and the influence on life.

Home-economics.—First half-year: Beginning with the

homes of the Middle Ages, and instituting a comparison between them and the homes of the present day, the class makes a study of the modern house. The plan of the house and its furnishings; the methods of heating, ventilating, and lighting; the water supply and the plumbing are considered and studied experimentally. Visits are made to buildings in process of construction. The study of the care of the individual home leads to that of municipal housekeeping, and emphasis is laid upon the responsibility of each household in helping to secure healthful conditions throughout the city, and in making the city beautiful.

Second half-year: The householder's responsibility—for pure food, as part of municipal housekeeping. Study of the pure-food laws; consideration of the interests of the manufacturer as well as of the consumer; household tests for food adulteration.

Mathematics.—1. Algebra viewed through arithmetic. By means of the equation, solve simple arithmetic problems, force problems, laws of simple machines, and mensuration laws, lead up to work with purely formal equations, and justify all reasoning by the five laws of the equation.

2. Mechanical drawing: Scale plans and elevations of accessible objects; scale drawings in manual training; representative drawings of accessible and remote tracts of ground; topographic work from data taken in the field; construction of ornamental designs; study of government land surveys.

3. Geometry: constructive, experimental, and quasi-demonstrative; relation of angles of polygons, shown experimentally and by measurements; construction of square corners on paper and in the field; running parallels and laying out curves; staking out lines at any angles to given lines; proofs of principles by actual superposition of representative figures; laws of similar triangles and their uses in field-work.

Literature.—Shakespeare, *Julius Caesar*; Aldrich, *Friar Jerome and His Beautiful Book*; Arnold, *Little Flowers of Saint Francis*; Henry Van Dyke, *The First Christmas Tree*; Tennyson, *Gareth and Lynette* (selected parts); Lowell, *The Vision of Sir Launfal*; Scott, *Marmion and Douglas*, and selections from *Ivanhoe*.

Home reading: As throwing light upon the history, the following poems and books are recommended for home reading. Some of the poems may be read with the class. Longfellow, "Venice," "The Belfry of Bruges," "Nuremberg," "Giotto's Tower," "The Sermon of Saint Francis," "Walter von der Vogelweide;" Scott, *Ivanhoe*, *The Talisman*; C. M. Yonge, *The Little Duke*; Pyle, *The Story of King Arthur*, *Robin Hood*, *Men of Iron*; Lanier, *The Boy's King Arthur*; Gunsaulus, *Monk and Knight*; Pitman, *Stories of Old France*; Harding, *The Story of the Seven Hills*; Brooks, *Historic Girls*, *Historic Boys*.

Pupils are expected, before completing the work of this grade, to have acquired the habit of spelling correctly, skill to write legibly, and power to express their thoughts clearly in both oral and written language. Systematic instruction in grammar to this end is a part of the work in English. There is a study of the sentence (subject and predicate, modifiers, phrases, clauses, kinds of sentence, forms—simple, complex, and compound). The parts of speech are learned, and some work is done in inflection. Scott and Buck's *Brief English Grammar* is used as a text-book.

Speech, oral reading, and dramatic art.—Subjects for oral reading are chosen from the general work in nature-study, history, and geography, from the subjects listed under "Literature," from Julius Caesar, and selections from Scott, and from other orations and dramatic selections to be used in the morning exercise. The oral reading of subject-matter bearing on these general topics is used to give the class information not otherwise to be obtained. The study of oratory has for its object the training of the pupils to speak with purpose and power to an audience.

French.—Selecting and printing of brief sketches of French history, dramatizing of scenes from *La Chanson de Roland* and *La Vie de Charlemagne*. Christmas work: Writing of scenes from *La Vie de Sainte Geneviève*, illustrations of Puvis de Chavannes used; Panthéon. Reading lessons and grammar work taken from *The Dramatic French Reader*. Review and printing of grammar record-book of the fifth, sixth, and seventh grades.

Reflexive and impersonal verbs; a few irregular verbs in common use; rules of past participle.

Latin.—Pupils who have previously studied French or German continue that study. Any who are not studying a modern language may begin Latin. The syntax of these languages, by conscious comparison and contrast, is used to aid in the understanding of English syntax. Latin in this grade consists of simple exercises planned in accordance with Professor Hale's *First Year Latin* lessons.

German.—The oral work in this grade is based upon the geography of Germany; the most important places of that country—especially those of importance in the Middle Ages. Poems and songs referring to these places are learned.

The formal work of the previous years is gathered up in the form of grammar this year. Conjugation of verbs, declension of nouns, adjectives, and pronouns. Special attention is paid to the correct use of these forms in the written exercises, as dictations, retelling of stories, answering of questions, etc. As a reader Seligmann's *Altes und Neues* is used.

Art.—Drawing and painting: (a) The pictorial work of the eighth grade is devoted to one or two large problems, such as a mural decoration representing a subject of class interest. The technique centers about the large problem and consists of the various preliminary studies required.

(b) Design: The summing-up of the principles of design is continued this year. More emphasis is placed on its historical elements.

Modeling: Second half-year. Illustrations of various phases of the life of the Middle Ages, emphasizing the spirit of chivalry and the work of monastic orders. Illustrations to be in the round or in relief, and colored when that is deemed advisable.

Textiles: Second half-year. Study of fabrics for clothing and for household use; classification of fabrics; some practice in fabric analysis; chemical tests for the different textile fibers; use of aniline dyes in the preparation of embroidery materials; preparation of maps, charts, and illustrative samples for the school museum to show the textile centers of the world, and

regions of production and manufacture; history of the evolution of textile machinery.

Metal-working: First half-year. This group has had two quarters of metal-work, and is able to design more intelligently for this material. Designs are applied to all pieces, either in etching, piercing, chasing, or in combinations of the three ways. The process of soldering and riveting may be freely used. Very simple buckles, hatpins, or brooches are possible.

Woodworking: First half-year. The making of articles for use in the school. The making of articles for individual use, with emphasis upon staining, polishing, and care of wood. In drawing there are: (a) free-hand drawing for proportion and design; (b) reduction of these drawings to working-drawings; (c) blueprints.

Bookbinding: First half-year. The work in this department is extremely simple, but effort is made to acquaint the pupil with a general knowledge of book-construction in forms suitable to his hand training. Various blank and printed books are bound in pamphlet, case, and library bindings, using materials best adapted. Various deviations from a prescribed outline are made, as the individual needs of the children in the school arise. The beginning French lessons have been put into simple but substantial form by some members of the bookbinding class, and a few copies of the curriculum have been bound for the library.

Excursions are made from time to time to some large printing and binding establishment to see and compare machine methods, and to smaller hand binderies to view the work from the more artistic side. In the history of bookbinding as an art, the work correlates with the study of the mediaeval arts. A visit to the Newberry Library is then made.

Music.—No technical work is done. The pupils meet for chorus-work twice a week and are taught unison and two-part songs of high musical worth. Those who are wholly unable to sing in tune are excused from the work.

Physical culture.—Results more than ever depend upon the attitude and interest of the pupil. The training should begin to show dexterity and co-ordinate action and power of endurance.

Proportion of formal exercises to games now becomes two-thirds. Rhythmic work largely folk-dances. Exercises chosen for direct bearing upon the growth and development of the period. Exercises of skill and precision with hand apparatus. Fundamental exercises on hanging and resting apparatus. The best games of the previous years are used for the free play at the close of the lesson, and, in addition, preparatory work for the highly organized competitive games.

Dancing.—Waltz, two-step, square dance ("Prairie Queen" or "Samson clog"); buck and wing; lilt.